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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,926	01/26/2004	Peter Maier-Laxhuber	119-29	9640

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EXAMINER

ALI, MOHAMMAD M

ART UNIT PAPER NUMBER

3744

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/764,926		Applicant(s) MAIER-LAXHUBER ET AL.	
	Examiner Mohammad Ali		Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 28 October 2005.

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-19 is/are pending in the application.

4a) Of the above claim(s) ____ is/are withdrawn from consideration.

5) ☒ Claim(s) 9 is/are allowed.

6) ☒ Claim(s) 1-8 and 10-19 is/are rejected.

7) ☐ Claim(s) ____ is/are objected to.

8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. ____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: ____
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Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5-8, 10-13, 16, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,518,069 to Maier-Laxhuber et al. in FIG. 1, Maier-Laxhuber teaches a sorption cooling apparatus and method for cooling a thermally insulated cooling container comprising a sorber container (2) containing a sorbent material (1) for sorbing a working fluid during a sorption phase; an evaporator (7) disposed inside the cooling container (1), said working fluid evaporating to a working fluid gas in said evaporator during a desorption phase; a valve (8) connected between said sorber container and said evaporator, said valve being adapted to be shut off for stopping a flow of said working fluid gas (6), an evaporator blower (11) disposed adjacent said evaporator for passing an air stream over said evaporator; and a sorber blower (5) disposed adjacent said sorber container for circulating air around said sorber container containing said sorbent material, said apparatus further comprising an electrical heating system dedicated to said sorber container (3), an electrical accumulator for supplying electricity to said sorber blower and said evaporator blower (014, lines 1-5), wherein said sorbent material comprises zeolite and said working fluid comprises water (col. 7, lines 39-40) and a temperature sensor coupled to said evaporator for turning off the electrical heating system of the sorber container once a preselected threshold temperature has been exceeded (col. 3, lines 7-16). The cooling container 10 has an inlet and outlet which is considered by the Examiner inlet and outlet doors.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,518,069 to Maier-Laxhuber et al., in view of U.S. Patent 5,664,427 to Rockenfeller et al. Maier-Laxhuber discloses applicant's basic inventive concept, a sorption cooling apparatus and #method for cooling a thermally insulated cooling container, substantially as claimed with the exception of stating that at least one of said sorber container and said evaporator includes surfaces, shaped like plates and are adapted for exchanging heat with a stream of air and that the method comprises opening the door of the cooling container during the desorption phase. Rockenfeller shows sorber container and evaporator, which include surfaces shaped like plates and are adapted for exchanging heat with a stream of air (col. 5, lines 38-40) and a sorption method for cooling comprising opening the door of the cooling container during the desorption phase (col. 16, lines 14-16) to be old in the refrigeration art. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made from the teaching of Rockenfeller to modify the system of Maier-Laxhuber, by specifying the shape of heat exchanging surfaces to be a plate in order to maximize the heat exchanging surface in a small and flat environment, based on common heat transfer calculations understood by those skilled in the art (col. 5, lines 35-60) and by opening the door of the cooling container during the desorption phase in order to enable the convective air cooling of the sorber reactor.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,518,069 to Maier-Laxhuber et al., in view of U.S. Patent 5,992,168 to Pfister et al. Maier-Laxhuber discloses applicant's basic inventive concept, a sorption cooling apparatus and method for cooling a thermally insulated cooling container, substantially as claimed with the exception of stating that the valve used is a control valve for controlling a temperature of an evaporator by means of throttling a stream of working fluid gas. Pfister shows a control valve (48, FIG. 1) for controlling a temperature of an evaporator (42, FIG. 1) by means of throttling a stream of working fluid gas (col. 5, lines 57-60) to be old in the refrigeration art. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made from the teaching of Pfister to modify the system of Maier-Laxhuber, by specifying that the valve used is a control valve for controlling a temperature of an evaporator by means of throttling a stream of working fluid gas in order to expand the working fluid prior to entering the evaporator and produce a cooling effect (col. 6, lines 43-45).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,518,069 to Maier-Laxhuber et al. Maier-Laxhuber discloses applicant's basic inventive concept, a sorption cooling apparatus and method for cooling a thermally insulated cooling container, substantially as claimed with the exception of stating that a sorber container is adapted to ensure that a maximum heat conduction path to a surface of the cooling container is less than 2 cm. The applicant should note that the change in size of the heat conduction path for the intended use is a design consideration within the skill of the art, *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Maier-Laxhuber, by specifying that the maximum heat conduction path to a surface of the cooling container is less than 2 cm in order to minimize the heat loss.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,518,069 to Maier-Laxhuber et al., in view of Monzyk et al., (6,824,592).

Maier-Laxhuber discloses applicant's basic inventive Concept substantially as claimed as stated above. However Maier-Laxhuber et al., do not disclose sorption phase is at least three times longer than the desorption phase. Monzyk et al., teach the use of sorption/desorption process carried out over a cycle of 10 second to 2 second in ratio.

(see col. 20, lines 22-300 for the purpose of carrying out desorption and sorption process. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sorption cooling apparatus of Maier-Lauxhuber et al., in view of Monzyk et al., such that a sorption/desorption cycle of 10 s to 2 s could be provided in order to complete the sorption/desorption cycle.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,518,069 to Maier-Laxhuber et al., in view of Smith et al., (6,701,724). Maier-Laxhuber discloses applicant's basic inventive Concept substantially as claimed as stated above. However Maier-Laxhuber et al., do not disclose -20 degree C to 0 degree C. Smith et al., teach the use of -20 degree C to + 20 degree C in a sorption cooling device for the purpose of cooling the cooling chamber. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sorption cooling apparatus of Maier-Lauxhuber et al., in view of Smith et al., such that an arrangement of -20 degree C to + 20 degree C could be provided in order to cooling chamber the to a desired range.

Allowable Subject Matter

Claim 9 is allowed.

Response to Arguments


Applicant's arguments, see remarks pages 7-9, filed 10/28/05, with respect to the objection(s) of claim(s) 9, 14 and 15 are persuasive but for the claims rejected under USC 102 rejection for claims 1, 5-8, 10-13, 16 and under USC 103 rejection for claims 2-4 and 17 have been fully considered and are not persuasive. Therefore, the objection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of new prior art. The Applicant argued, "It is respectfully submitted that none of the cited references, taken alone or combined, describes a sorption apparatus including cooling container and an evaporator disposed inside the cooling container, as defined in amended claims 1 and 10." The Examiner disagrees.

The Examiner considers the insulating hood 10 is the cooling container as the claimed invention and the item 7 which has been termed vaporized operating medium container 7 (see col. 3, lines 52-55) an evaporator.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad Ali whose telephone number is (571) 272-4806. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Melba Bumgarner can be reached on (571) 272-4709. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Mohammad M. Ali
November 13, 2005